PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

AGENDA ID # 16781
RESOLUTION E-4945
September 13, 2018

R E D A C T E D
R E S O L U T I O N

Resolution E-4945. Pacific Gas and Electric Company (PG&E) requests approval of an amendment to an existing power purchase agreement (PPA) with Shiloh Wind Project 2, LLC (Shiloh 2).

PROPOSED OUTCOME:

- This Resolution approves an amendment to an existing PPA between PG&E and Shiloh 2, LLC. The amendment is approved without modification.

SAFETY CONSIDERATIONS:

- The amendment to the PPA does not appear to result in any adverse safety impacts on the facilities or operations of PG&E. The amendment requires the sellers of the generation to continue to comply with all applicable safety requirements relating to the project.

ESTIMATED COST:

- The estimated remaining energy cost of the power purchase agreement, as amended, is $402,269,834. The amendment is confidential at this time and will become publicly available per D.06-06-066.

By Advice Letter 5270-E, filed on April 9, 2018.

SUMMARY

PG&E's renewable energy power purchase agreement (PPA), as amended, with Shiloh 2,[1] complies with the Renewables Portfolio Standard (RPS) procurement guidelines and is approved without modification.

PG&E filed Advice Letter (AL) 5270-E on April 9, 2018, requesting the California Public Utilities Commission (Commission) to review and approve an Amended and Restated Power Purchase Agreement (Amended PPA) to an existing, long-term Renewables Portfolio Standard (RPS) Power Purchase Agreement (the Original PPA) between PG&E and Shiloh 2. The Original PPA was a 20-year contract for generation from one new wind facility, Shiloh 2 in Birds Landing, California that was executed in April 2008. The Amended PPA resulted from bilateral negotiations between PG&E and Shiloh 2 and it was executed on January 9, 2018.

Changes to the Original PPA pursuant to the Amended PPA would:

1. Transfer the facility's Scheduling Coordinator (SC) role from Shiloh 2 to PG&E; and
2. Provide PG&E with the right to offer curtailment into the California Independent System Operator (CAISO) market when production would be uneconomic.

The amendment to the PPA does not affect contract price, interconnection point, or the length of the contract. In AL 5270-E, PG&E asserts that the Total Net Market Value (NMV) of the Amended PPA will increase over the lifetime of the remaining contract, and the ability to offer curtailment may slightly reduce ratepayers' costs.

Shiloh 2 initiated discussions with PG&E in spring 2014 about amending the PPA in response to the CAISO's implementation of FERC Order 764.[2] The Amended PPA's curtailment provisions will result in more flexibility and avoidance of deliveries, imbalances charges, and volatile ancillary services prices during

[1] Owned by EDF Renewable Energy, Inc. formerly enXco.

[2] In 2014, ISO implemented a new 15-minute market with financially binding energy and ancillary services awards for internal generators, imports and exports and participating loads to comply with FERC Order No. 764, which required the ISO to offer intra-hour transmission scheduling.

negative market price episodes. PG&E's execution of the Amendment is consistent with PG&E's 2017 RPS Procurement Plan, approved in Decision 17-12-007. This resolution approves the Amended PPA without modification.

Table 1 below provides a summary of the Amended PPA between PG&E and Shiloh 2.

Table 1: Summary of the Shiloh 2, LLC Amended PPA

Generating Facility	Technology Type	Delivery Term (Years)	Capacity (MW)	COD	Location
Shiloh 2	Wind	20	150	12/1/09	Birds Landing, CA

BACKGROUND

Overview of the Renewables Portfolio Standard (RPS) Program

The California RPS program was established by Senate Bill (SB) 1078, and has been subsequently modified by SB 107, SB 1036, SB 2 (1X), and SB 350.[3] The RPS program is codified in Public Utilities Code Sections 399.11-399.32. [4]

The RPS program administered by the Commission requires each retail seller to procure eligible renewable energy resources so that the amount of electricity generated from eligible renewable resources be 33 percent of retail sales by December 31, 2020.[5] On October 7, 2015, SB 350[6] made further changes to Pub. Util. Code Sections 399.11, et seq. SB 350 requires that the amount of electricity

[3] SB 1078 (Sher, Chapter 516, Statutes of 2002); SB 107 (Simitian, Chapter 464, Statutes of 2006); SB 1036 (Perata, Chapter 685, Statutes of 2007); SB 2 (1X) (Simitian, Chapter 1, Statutes of 2011, First Extraordinary Session); SB 350 (de León, Chapter 547, Statutes of 2015).

[4] All further statutory references are to the Public Utilities Code unless otherwise specified.

[5] D.11-12-020 established a methodology to calculate procurement requirement quantities for the three different compliance periods covered in SB 2 (1X) (2011-2013, 2014-2016, and 2017-2020). Note it is 33% of a Load Serving Entity's annual retail sales for 2020 and each year thereafter.

[6] SB 350 (De León, Chapter 547, Statutes of 2015) effective on January 1, 2016.

generated and sold to retail customers from eligible renewable energy resources be increased to 50% by December 31, 2030. [7]

Additional background information about the Commission's RPS Program, including links to relevant laws and Commission decisions, is available at http://www.cpuc.ca.gov/RPS_Overview/ and http://www.cpuc.ca.gov/RPS_Decisions_Proceedings/.

NOTICE

Notice of AL 5270-E was made by publication in the Commission's Daily Calendar. PG&E states that a copy of the Advice Letter was mailed and distributed to the R.15-02-020 service list in accordance with Section 4 of General Order 96-B. PG&E also states that a copy of the Advice Letter was mailed to members of PG&E's Procurement Review Group.

PROTESTS

PG&E Advice Letter 5270-E was not protested.

DISCUSSION

Pacific Gas and Electric Company requests approval of an amendment to an existing power purchase agreement with Shiloh 2 Wind, LLC.

The Shiloh 2 project is a 150 megawatt (MW) new wind facility located near Birds Landing, CA and began operations in 2009. In April 2008, the Commission approved Advice Letter 3143-E, which requested approval of a 20-year PPA between PG&E and Shiloh 2. In the spring of 2014, Shiloh 2 initiated bilateral negotiations with PG&E to address market structure changes due to CAISO's implementation of FERC Order 764. The Amended PPA was executed on January 9, 2018. On April 19, 2018, PG&E filed AL 5270-E (Shiloh 2 AL) requesting Commission approval of the Amended PPA with Shiloh 2. PG&E asserts in the Shiloh 2 AL that the purpose of the proposed amendment is to address market structure changes due to the CAISO implementation of FERC's

[7] D.16-12-040 established additional procurement requirement quantities for the three compliance periods established by SB 350: 2021-2024, 2025-2027, 2028-2030.

Order 764 and to allow PG&E to ensure that the Shiloh 2 will be able to fully participate in the CAISO market going forward.

The amendment modifies the original PPA as follows:

1. Transfers the facility's SC role from Shiloh 2's third-party SC to PG&E; and
2. Provides PG&E with the right to offer curtailment into the CAISO market when production would be uneconomic.
3. Makes technical modifications that are not projected to impact project operations or costs.

The Amended PPA does not affect contract price, interconnection point, or the length of the contract. In the Shiloh 2, PG&E asserts that the Total Net Market Value (NMV) of the Amended PPA will increase over the lifetime of the remaining contract. The increased value results from increased flexibility provided by the curtailment provisions to avoid deliveries, imbalances charges, and volatile ancillary services prices during negative market price episodes. While taking on the role of SC from the seller increases the exposure of PG&E ratepayers to CAISO imbalance costs and penalties, ratepayers would still likely have absorbed the material imbalance risk absent the contract amendment once the CAISO tariff was changed.

PG&E requests that the Commission issue a resolution that:

1. Approves the Amended and Restated PPA in its entirety, including payments to be made by PG&E pursuant to the Amended and Restated PPA, subject to the Commission's review of PG&E's administration of the Amended and Restated PPA.
2. Finds that any procurement pursuant to the Amended and Restated PPA is procurement from eligible renewable energy resources for purposes of determining PG&E's compliance with any obligation that it may have to procure eligible renewable energy resources pursuant to the California RPS (Public Utilities Code Section 399.11 et seq.), D.11-12-020 and D.11-12-052, or other applicable law.
3. Finds that all procurement and administrative costs, as provided by Public Utilities Code section 399.13(g), associated with the Amended and Restated PPA shall be recovered in rates.

4. Adopts the following finding of fact and conclusion of law in support of CPUC Approval:
    a. The Amended and Restated PPA is consistent with PG&E's 2017 RPS procurement plan.
    b. The terms of the Amended and Restated PPA, including the prices of delivered energy and deemed delivered energy, are reasonable.
5. Adopts the following finding of fact and conclusion of law in support of cost recovery for the Amended and Restated PPA:
    a. The utility's payments to Shiloh II under the Amended and Restated PPA shall be recovered through PG&E's Energy Resource Recovery Account.
6. Adopts the following findings with respect to resource compliance with the EPS adopted in R.06-04-009:
    a. a. The Amended and Restated PPA is pre-approved as meeting the EPS because it is for an existing wind facility covered by Conclusion of Law 35(d) of D.07-01-039.
7. Adopts a finding of fact and conclusion of law that deliveries from the Amended and Restated PPA shall be categorized as grandfathered procurement pursuant to California Public Utilities Code Section 399.16(d), subject to the Commission's after-the-fact verification that all applicable criteria have been met.

Energy Division evaluated Amended PPA based on the following criteria:

- Consistency with PG&E's 2017 RPS Procurement Plan;
- Consistency with Bilateral Contracting Rules
- Consistency with PG&E's Least-Cost, Best-Fit methodology (LCBF);
- Net Market Value and Cost Reasonableness;
- Independent Evaluator Review;
- Procurement Review Group Participation;
- Project Viability Assessment and Development Status; and
- Public Safety.

Consistency with PG&E's 2017 RPS Procurement Plan

Pursuant to statute, PG&E's 2017 RPS Procurement Plan (2017 RPS Plan) includes an assessment of RPS supply and demand to determine the optimal mix of renewable generation resources; description of existing RPS portfolio; description of potential RPS compliance delays; status update of projects within its RPS portfolio; an assessment of the project failure and delay risk within its RPS portfolio; and bid solicitation protocol setting forth the need for renewable generation of various operational characteristics.[8] California's RPS statute also requires that the Commission review the results of a renewable energy resource solicitation submitted for approval by a utility.[9] The Commission reviews the results to verify that the utility conducted its solicitation according to its Commission-approved procurement plan.[10]

In PG&E's 2017 RPS Plan, PG&E asserts that it is well positioned to meet the current 33% RPS by 2020 target, as well as meet its RPS compliance requirements for the third (2017-2020), fourth (2021-2024) and fifth (2025-2027) compliance periods. Based on that assessment, PG&E stated that it will not have an incremental RPS physical need until after 2030.

As a Commission-approved PPA, the Shiloh 2 facility was assumed in D.17-12-007 as a facility that would contribute to RPS supply in PG&E's portfolio. In the Shiloh 2 AL, PG&E explains that the Amended PPA will not increase the size of PG&E's bank of surplus RPS procurement since it does not increase deliveries from the Shiloh 2 and the Original PPA would continue in effect if the Amended PPA was not executed. The Amendment was negotiated through bilateral efforts because PG&E believed that negotiating an amendment to the Original PPA would result in concrete actions to address grid stability in a more expedited manner than issuing a solicitation, particularly where the Amended PPA contains terms that are consistent with the existing PPA terms. PG&E asserts that the Amended PPA will likely reduce the sum of payments to be made by PG&E customers to the project.[11]

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[8] Pub. Util. Code § 399.13(a)(5).

[9] Pub. Util. Code § 399.13(d).

[10] PG&E's 2017 Draft RPS Procurement Plan was approved by D.17-12-007 on December 14, 2017.

[11] The reduction in PG&E's ratepayer payments come from PG&E's right to offer curtailment of the Shiloh 2 facility into the CAISO market when production would be uneconomic.

The Amendment shifts scheduling coordination responsibilities and provides buyer curtailment rights. Based on PG&E's assessment of RPS portfolio supplies and demand outlined in its 2017 RPS Plan, the Amendment does not change the amount of RPS supply in any significant way.

Therefore, <u>the amended Shiloh 2 PPA is consistent with PG&E's RPS portfolio needs in its 2017 RPS Procurement Plan, as approved by D.17-12-007.</u>

Consistency with Bilateral Contracting Rules

PG&E and Shiloh 2 negotiated the Amended PPA on a bilateral basis. A bilateral negotiation of an existing contract was chosen as PG&E's approach for increasing curtailment capabilities across its portfolio.

The Commission developed guidelines pursuant to which utilities may enter into bilateral RPS contracts. In D.03-06-071, the Commission authorized entry into bilateral RPS contracts. In D.06-10-019, the Commission further established rules pursuant to which the IOUs could enter into bilateral RPS contracts. PG&E adhered to these bilateral contracting rules because the Amended PPA is longer than one month in duration, the Amended PPA was filed by advice letter, and the contracts are reasonably priced, as discussed in more detail below.

In D.09-06-050, the Commission determined that bilateral agreements should be reviewed according to the same processes and standards as projects that come through a solicitation. Accordingly, as described below, the Amended PPA was reviewed for cost reasonableness; the proposed agreement was reviewed by PG&E's Procurement Review Group; and an independent evaluator oversaw the Amended PPA negotiation.

<u>The Shiloh 2 Amended PPA is consistent with the bilateral contracting guidelines established in D.06-10-019 and D.09-06-050</u>.

Consistency with PG&E's Least-Cost, Best-Fit Methodology (LCBF)

In D.04-07-029, the Commission directs the utilities to use certain criteria in their LCBF selection of renewable resources.[12] The decision offers guidance regarding the process by which the utility ranks bids in order to select or "shortlist" the bids with which it will commence negotiations. As described in its RPS Procurement Plan, PG&E's LCBF bid evaluation includes a quantitative analysis and qualitative criteria. PG&E's quantitative analysis or market valuation includes evaluation of price, time of delivery factors, transmission costs, congestion costs, and resource adequacy. PG&E's qualitative analysis focuses on comparing similar bids across numerous factors, such as location, benefits to minority and low income areas, and resource diversity.

PG&E and Shiloh 2 negotiated the proposed amendments bilaterally; therefore, the Amended PPA did not compete directly with other RPS projects. However, the Amended PPA underwent a Net Market Value and Cost Reasonableness review. The Amended PPA was compared against the Original PPA on a LCBF basis, therefore, <u>the Amended PPA was evaluated consistent with the least-cost best-fit methodology identified in PG&E's 2017 RPS Procurement Plan.</u>

Cost Reasonableness and Net Market Value

The Commission's reasonableness review for RPS PPAs includes a comparison of the proposed PPA's price and net market value (the result of the LCBF calculation) relative to other RPS offers received in recent RPS solicitations. Deliveries from the Shiloh 2 Wind project to PG&E will continue to be priced at $86.90/MWh before adjustments by time-of-delivery factors, which the CPUC found to be reasonable when approving the Original PPA and the confidential quantitative analysis provided by PG&E in the Shiloh 2 AL. Additionally, the Commission finds that the net market value of the Amended PPA is reasonably competitive relative to the net market value of the underlying Original PPA. See Confidential Appendix A for a more detailed discussion of the contractual pricing terms.

<u>The Shiloh 2 PPA, as amended, compares reasonably to net market value of the Original PPA, which would remain in effect in the absence of the amended PPA.</u>

[12] *See* § 399.14(a)(2)(B).

Payments made by PG&E under the Shiloh 2 PPA, as amended, are fully recoverable in rates over the life of the Amended PPA, subject to Commission review of PG&E's administration of the Amended PPA.

Independent Evaluator Review

PG&E retained Arroyo Seco Consulting as the independent evaluator (IE) to provide a report on the Shiloh 2 Amended PPA[13]. The IE states in its report that the PPA was reasonably negotiated with contract terms that taken as a whole appropriately protect the interests of PG&E's ratepayers. The IE also concludes that the project's fit with PG&E's portfolio is low because its production is expected to contribute to the estimated net long position and to exacerbate PG&E's excess procurement of RPS-eligible energy. Project viability is high given that it is an existing project already delivering electricity. Overall the IE states that it agrees with PG&E that the Amended PPA merits Commission approval. More discussion about the IE report on the Shiloh 2 PPA is included in Confidential Appendix A.

Consistent with D.06-05-039, an independent evaluator oversaw PG&E's bilateral negotiations with Shiloh 2 for the Amended PPA.

Procurement Review Group Participation

The Procurement Review Group (PRG) was initially established in D.02-08-071 as an advisory group to review and assess the details of the IOUs' overall procurement strategy, solicitations, specific proposed procurement contracts and other procurement processes prior to submitting filings to the Commission.[14] PG&E asserts that the proposed amendment to the Shiloh 2 PPA was presented to the PRG via e-mail on December 15, 2017. PG&E consulted with the PRG and provided their rationale for executing the Amendment.

Pursuant to D.02-08-071, PG&E's Procurement Review Group participated in the review of the proposed amendment to the Shiloh 2 PPA.

[13] The Shiloh Wind Project 2 AL includes a public and confidential version of the IE's report.

[14] PG&E's PRG includes representatives from the Commission's Energy Division and the Office of Ratepayer Advocates, The Utility Reform Network, the California Utility Employees, the Union of Concerned Scientists and the Department of Water Resources.

Project Viability Assessment and Development Status

The Amended PPA is for an operational facility and does not present any project development risk. Furthermore, as Shiloh 2 is an existing generation facility that has operated reliably for years, it is reasonable to expect the facility to meet the terms of the amended and re-stated PPA.

RPS Eligibility and CPUC Approval

Pursuant to Pub. Util. Code § 399.13, the CEC certifies eligible renewable energy resources. Generation from a resource that is not CEC-certified cannot be used to meet RPS requirements. To ensure that only CEC-certified energy is procured under a Commission-approved RPS contract, the Commission has required standard and non-modifiable "eligibility" language in all RPS contracts. That language requires a seller to warrant that the project qualifies and is certified by the CEC as an "Eligible Renewable Energy Resource," that the project's output delivered to the buyer qualifies under the requirements of the California RPS, and that the seller uses commercially reasonable efforts to maintain eligibility should there be a change in law affecting eligibility.[15]

The Commission requires a standard and non-modifiable clause in all RPS contracts that requires "CPUC Approval" of a PPA to include an explicit finding that:

> "Any procurement pursuant to this Agreement is procurement from an eligible renewable energy resource for purposes of determining Buyer's compliance with any obligation that it may have to procure eligible renewable energy resources pursuant to the California Renewables Portfolio Standard (*Public Utilities Code Section 399.11 et seq.*), Decision 03-06-071, or other applicable law."[16]

Notwithstanding this language, the Commission has no jurisdiction to determine whether a project is an eligible renewable energy resource. In addition the Commission cannot determine prior to final CEC certification of a project that "any procurement" pursuant to a specific contract will be "procurement from an eligible renewable energy resource."

[15] *See, e.g.* D.08-04-009 at Appendix A, STC 6, Eligibility.

[16] *See, e.g.* D.08-04-009 at Appendix A, STC 1, CPUC Approval.

Therefore, while we include the required finding here, this finding has never been intended, and shall not be read now, to allow the generation from a non-RPS-eligible resource to count towards an RPS compliance obligation. Nor shall such a finding absolve the seller of its obligation to obtain CEC certification, or the utility of its obligation to pursue remedies for breach of contract. Such contract enforcement activities shall be reviewed pursuant to the Commission's authority to review the utilities' administration of contracts.

Shiloh 2 has already received certification by the CEC as an Eligible Renewable Energy Resource. The facility must continue maintain its RPS-certification as required by the standard and non-modifiable "eligibility" language of the PPA.

Public Safety

California Public Utilities Code Section 451 requires that every public utility maintain adequate, efficient, just and reasonable service, instrumentalities, equipment and facilities to ensure the safety, health, and comfort of the public. The original PPA requires Shiloh 2, LLC to comply with all applicable laws relating to project safety, including those related to planning, construction, ownership, decommissioning and/or operation of the projects. As this amendment does not change the original PPA terms related to safety, there are no incremental safety implications associated with approval of this contract beyond the status quo.

While the Commission is not authorized to administer Occupational Safety & Health Administration (OSHA) workplace safety standards, the Commission reviewed historic OSHA records for the parties related to eligible RPS projects in California. Neither the facility, Shiloh 2, LLC, nor the lead company, EDF RE, Inc., have had OSHA violations.

Confidential Information

The Commission, in implementing Pub. Util. Code § 454.5(g), has determined in D.06-06-066, as modified by D.07-05-032, that certain material submitted to the Commission as confidential should be kept confidential to ensure that market sensitive data does not influence the behavior of bidders in future RPS solicitations. D.06-06-066 adopted a time limit on the confidentiality of specific terms in RPS contracts. Such information, such as price, is confidential for three years from the date the contract states that energy deliveries begin, except contracts between IOUs and their affiliates, which are public.

The confidential appendices, marked "[REDACTED]" in the public copy of this resolution, as well as the confidential portions of the advice letter, should remain confidential.

COMMENTS

This is an uncontested matter in which the resolution grants the relief requested. Accordingly, pursuant to Public Utilities Code § 311(g)(2), the otherwise applicable 30-day period for public review and comment is being waived.

FINDINGS

1. The Shiloh 2 PPA, as amended, is consistent with PG&E's 2017 RPS Procurement Plan, as approved by D.17-12-007.
2. The Shiloh 2 PPA, as amended, is consistent with the bilateral contracting guidelines established in D.06-10-019 and D.09-06-050.
3. The Shiloh 2 PPA, as amended, was evaluated consistent with the least-cost best-fit methodology identified in PG&E's 2017 RPS Procurement Plan.
4. Shiloh 2 PPA as amended, compares reasonably on a net market value and cost basis relative to the original power purchase agreement.
5. Payments made by PG&E under the Shiloh 2 PPA, as amended, are fully recoverable in rates over the life of the Amended PPA, subject to Commission review of PG&E's administration of the Amended PPA and any other conditions contained herein or required by law.
6. Consistent with D.06-05-039, an independent evaluator oversaw PG&E's bilateral negotiations with Shiloh 2 for the amended PPA.
7. Pursuant to D.02-08-071, PG&E's Procurement Review Group participated in the review of the amendment to the Shiloh 2 PPA.

8. Procurement pursuant to Shiloh 2 PPA as amended is procurement from eligible renewable energy resources for purposes of determining PG&E's compliance with any obligation that it may have to procure eligible renewable energy resources pursuant to the California Renewables Portfolio Standard (Public Utilities Code Section 399.11 et seq.), D.03-06-071 and D.06-10-050, or other applicable law.
9. The immediately preceding finding shall not be read to allow generation from a non-RPS eligible renewable energy resource under this amended PPA to count towards an RPS compliance obligation. Nor shall that finding absolve PG&E of its obligation to enforce compliance with this amended PPA.
10. The confidential appendices, marked "[REDACTED]" in the public copy of this Resolution, as well as the confidential portions of Advice Letter 5270-E, should remain confidential.
11. AL 5270-E should be approved effective today without modification.

THEREFORE IT IS ORDERED THAT:

1. Pacific Gas and Electric Company's Advice Letter 5270-E requesting Commission review and approval of an amended and restated renewable power purchase agreement with Shiloh Wind Project 2, LLC is approved without modification.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on September 13, 2018; the following Commissioners voting favorably thereon:

ALICE STEBBINS
Executive Director

<u>Confidential Appendix A</u>

Evaluation Summary of the Amended
Shiloh 2 Wind PPA

[REDACTED]